March 31, 2008

Via Electronic Filing

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, SW, TW – A325
Washington, DC 20554

Re: WT Docket No. 07-195 -- Oral Ex Parte Presentation

Dear Ms. Dortch:

On March 28, 2008, John Muleta, Mike Meece, Paul Kolodzy and the undersigned, on behalf of M2Z Networks, Inc, discussed engineering issues relevant to the AWS-3 rulemaking with Wireless Telecommunications Bureau Chief Fred Campbell, Mr. Joel Taubenblatt, and Mr. Martin Liebman. Below is a brief summary of M2Z's presentation.

- The AWS-3 block is a great opportunity for the introduction of new and novel wireless broadband services to American consumers using spectrally efficient TDD technologies. It has been well documented in the record of this proceeding, last year's 700 MHz service rules docket, as well as the AWS-1 proceeding that new wideband technologies used to provide wireless broadband services require a minimum of 20 MHz of spectrum.[1] In addition, the record supports strong buildout requirements for the AWS-3 band while the adjacent bands to AWS-3 have less stringent buildout requirements and any technical service rules must reflect these differences.

- TDD/FDD coexistence issues are not novel and the Commission has repeatedly followed the course of establishing flexible and technologically neutral service rules for dealing with co-existence issues while providing all licensees protection from harmful interference. This is exactly the course that the Commission adopted for the recently concluded 700 MHz band service rules rulemaking as well as for the BRS/EBS band.

- Although there is always the potential for mutual harmful interference between the AWS-1 and AWS-3 licensees, the impact can be greatly minimized and controlled if the licensees use well established technologies and techniques to mitigate such occurrences as detailed below. Moreover, because the AWS-1 and AWS-3 licensees may both suffer harmful interference from each other's operations without coordinated efforts, the Commission's rules should provide flexible service rules that encourage the already strong incentive for all the licensees to cooperate and fulfill their mutual obligations to avoid harmful interference.

[1] *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Second Report and Order, 22 FCC Rcd 15289, ¶ 69 (2007) (*700 MHz Second Report and Order)* ("As the Commission found in the AWS-1 proceeding, 20-megahertz (or larger) spectrum blocks enable a broader range of broadband services (including Internet access at faster speeds), accommodate future higher data rates, and provide operators with additional capacity and, importantly, flexibility.").

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- The AWS-3 licensee faces the risk of base-to-base harmful interference from AWS-1 transmitters. The AWS-1 licensee faces a risk of mobile-to-mobile harmful interference in a "near/far" scenario where the AWS-1 mobile receiver is near an AWS-3 mobile transmitter while being far from an AWS-1 transmitter.
- The base-to-base harmful interference scenario to AWS-3 is static and deterministic and, absent mitigation efforts by the AWS-1 licensee, will likely cause significant harmful interference to AWS-3 TDD operations and severely restrict its ability to provide meaningful broadband services.
- The mobile-to-mobile harmful interference scenario to AWS-1 is both probabilistic and, as previously explained on the record, highly unlikely. With recent technological advances, the already minuscule chance of harmful interference to AWS-1 operations can be further mitigated by a range of actions that are reasonable, economical and would not require the AWS-3 licensee to significantly reduce network capacity for broadband services (unlike arbitrarily mandated guard bands or service restrictions like "downlink" only broadcast services).
- M2Z believes that the public interest would be served by allowing the licensees to determine how best to manage harmful interference consistent with reasonable out of band emission limits and power levels as set forth in the 700 MHz proceeding (*e.g.* 43 + 10 log P and a power limit for the fixed and base stations of 1000 W/MHz ERP for non-rural and 2000 W/MHz ERP for rural environs, 30 W ERP for mobile stations, and 3 W ERP for portable stations).[2]
- M2Z agrees with Ofcom,[3] Sprint Nextel, and others that there are a host of mitigation techniques available to avoid harmful interference to AWS-1 operations. These techniques can be used separately or in combination to ensure that harmful interference does not occur. The available mitigation techniques include, but are not limited to:
    - Base station siting
    - Antenna polarization
    - Adaptive antennas
    - Transmitter/Receiver Improvements
    - Power control
    - Mobile handover
    - Intersystem frequency coordination
    - Cognitive radio technology for interference control

The Commission has undertaken this important rulemaking to ensure that AWS-3 band is deployed to provide American consumers with a new competitive broadband service using spectrally efficient technologies such as TDD. This outcome is possible with flexible technical rules for the band that encourage both AWS-1 and AWS-3 licensees to design their systems to mutually avoid harmful interference to each other's operations. The exact mix of mitigation techniques and technologies used to avoid harmful interference to both AWS-1 and AWS-3 operations require "in-the-field" engineering and system design analysis and is best left to mutual coordination and cooperation of the licensees.

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[2] *See* 47 C.F.R § 27.50 & 27.53. Since M2Z originally proposed OOBE and power limits for operations in the 2155-2175 MHz band in May 2006, the Commission has performed an extensive rulemaking that, among other things, concerned the proper OOBE and power limits for commercial wireless broadband services. In light of the record recently developed on this issue, it would efficient and consistent for the Commission to follow its recently adopted standards for OOBE and power levels as outlined in the *700 MHz Second Report and Order* in AWS-3.

[3] *See* Ofcom 2500-2690MHz, 2010-2025MHz and 2290-2302 MHz Spectrum Awards – Engineering Study (Phase 2) at § 5.1.2 (November 2006) available at: http://www.ofcom.org.uk/consult/condocs/2ghzawards/masonresearch.pdf.

Pursuant to Section 1.1206(b) of the Commission rules, an electronic copy of this letter is being filed. Please let me know if you have any other questions regarding this submission.

Sincerely,

Uzoma C. Onyeije

Cc: Fred Campbell
Joel Taubenblatt
Martin Leibman